

इंटरनेट

मानक

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“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

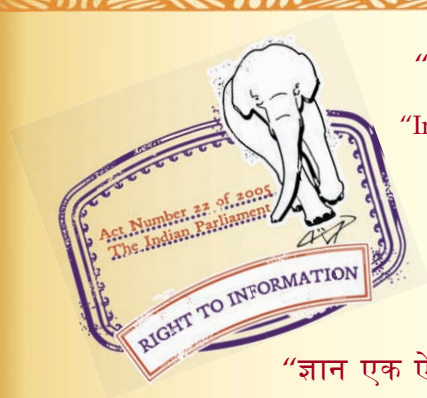
“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 10353 (1982): Pliers, McKellops' Type, Dental [MHD 8: Dentistry]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”



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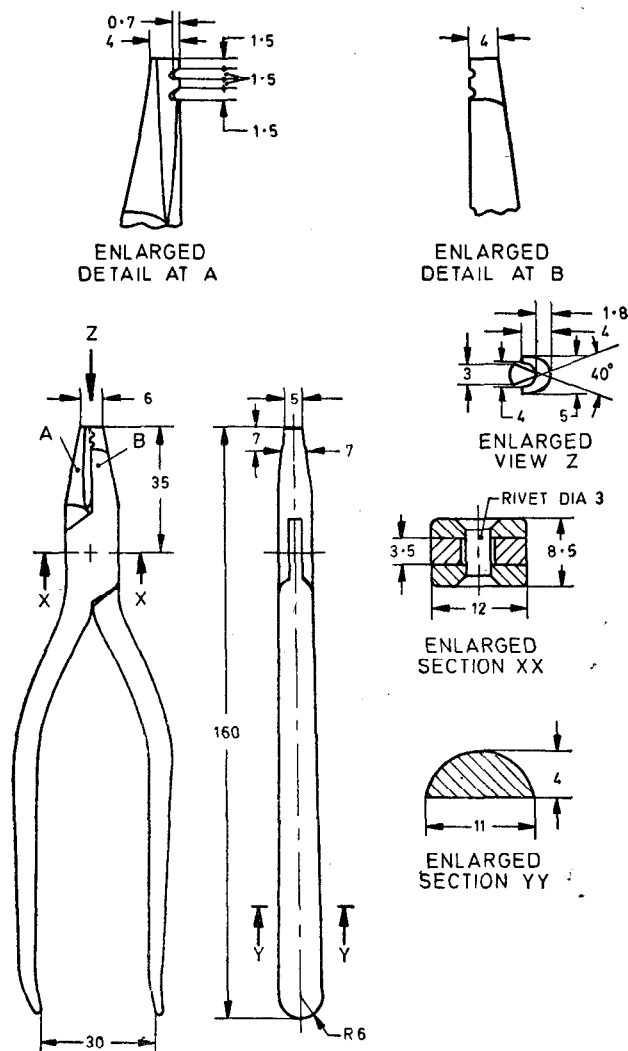
Indian Standard

# SPECIFICATION FOR PLIERS, McKELLOPS' TYPE, DENTAL

**1. Scope** — Specifies dimensional and other requirements for McKellops' type pliers used for bending of wires of diameter up to 1.22 mm used in dentistry.

**2. Material** — Stainless steel conforming to designation 20Cr13 or 30Cr13 of IS:6603-1972 'Specification for stainless steel bars and flats'. The steel used for the rivet shall be same as that used for the pliers.

**3. Shape and Dimensions** — As shown in Fig. 1.



All dimensions in millimetres.

FIG. 1 PLIERS, McKELLOPS' TYPE, DENTAL

**3.1** The tolerances on various dimensions shall be permitted as given below:

- $\pm 0.2$  mm on dimensions up to 5.0 mm,
- $\pm 0.5$  mm on dimensions above 5.0 mm and up to 10.0 mm,
- $\pm 1.0$  mm on dimensions above 10.0 mm and up to 50.0 mm,
- $\pm 2.0$  mm on dimensions above 50.0 mm and up to 100.0 mm, and
- $\pm 5.0$  mm on dimensions above 100.0 mm.

**4. Workmanship and Finish**

**4.1** The two halves of the pliers shall move fully and freely about the joint without any play. The movement shall be balanced and the jaws shall register accurately.

**4.2** The joint shall be box type conforming to 6 of IS : 3642 - 1978 'General requirements for surgical instruments ( *first revision* )'. The ends of the rivet in the joint shall be finished flush with the surface.

**4.3** The pliers shall be free from sharp edges, pits, burrs, cracks and other surface defects. All the edges except the working end shall be rounded.

**4.4** The surfaces of the pliers shall be finished smooth and bright except the outside surfaces of the handles, which shall have a matt finish.

**4.5** The pliers shall be passivated by treating it in 10 percent ( v/v ) nitric acid solution, for not less than 30 minutes, at a temperature of not less than 10°C and not exceeding 60°C. The pliers shall then be rinsed in water, dried in hot air and the joint lightly lubricated with a nontoxic and noncorrosive substance.

**5. Heat Treatment** — The pliers shall be uniformly hardened and tempered to a hardness of 370 *HV* to 410 *HV*.

**6. Tests**

**6.1 Practical Test** — A stainless steel wire of diameter 1.22 mm, conforming to Designation 04Cr18Ni10 or 07Cr18Ni9 of IS : 6528 - 1972 'Specification for stainless steel wire' shall be bent six times with the pliers. On completion of the test, the pliers shall neither show any sign of damage nor acquire a permanent set.

**6.2 Elasticity Test** — The pliers shall be made to grip a piece of 1 mm thick hardened steel bit. The bit chosen shall be such as not to be damaged by the test. A compressive force of 20 kgf shall be applied to the pliers and allowed to act for 5 minutes, in such a manner that the force acts on each handle ( a total of 40 kgf on the instrument ) at a distance of 40 mm from its free end. On completion of the test, the pliers shall neither show any sign of damage nor acquire a permanent set.

**6.3 Corrosion Resistance Test** — The pliers shall be tested in accordance with IS : 7531 - 1975 'Method for boiling and autoclaving test for corrosion resistance of stainless steel surgical instruments'. It shall show no sign of corrosion after the test.

**7. Marking** — Each pliers shall be legibly and indelibly marked with the manufacturer's name, initials or registered trade-mark; the letters 'SS' or the words 'Stainless Steel'; and the country of manufacture.

**7.1 ISI Certification Marking** — Details available with the Indian Standards Institution.

**8. Packing** — Each pliers shall be wrapped either in a polyethylene bag or wax paper. It shall then be packed in cartons in accordance with the current trade practice. The cartons shall bear the name of the pliers; manufacturer's name, initials or registered trade-mark; the words 'Stainless Steel'; and the country of manufacture.

**8.1** The pliers may also be packed as agreed to between the purchaser and the supplier.